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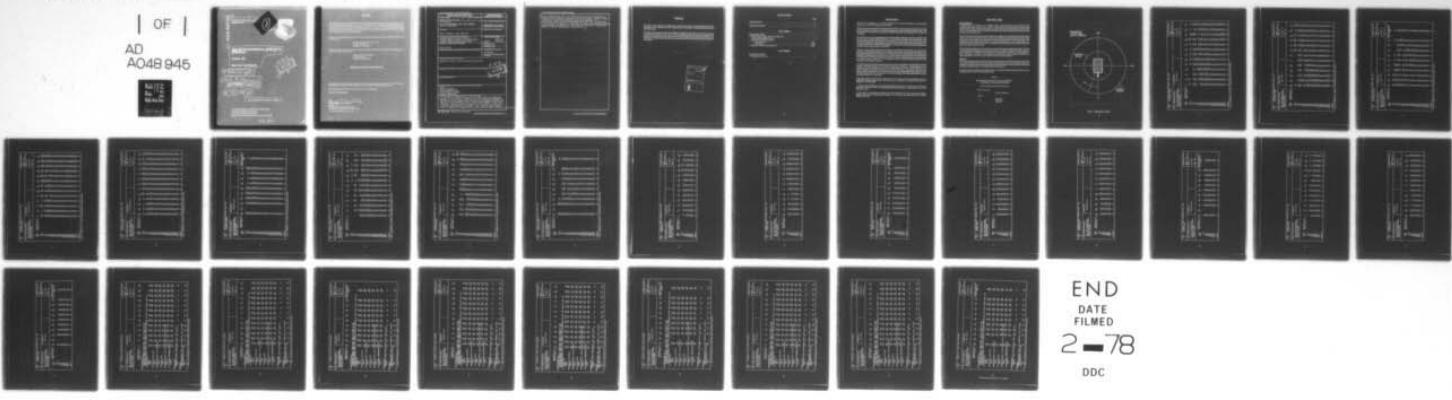
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Volume 107

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**USAF BIOENVIRONMENTAL NOISE DATA
HANDBOOK.**

Volume 107.

MA-8 Air Conditioner.

9 Technical rept.,

10 Nick A. Farinacci

11 DEC 1976

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AEROSPACE MEDICAL RESEARCH LABORATORY
AEROSPACE MEDICAL DIVISION
AIR FORCE SYSTEMS COMMAND
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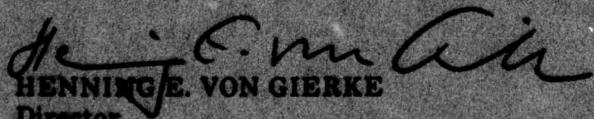
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FOR THE COMMANDER



HENNING E. VON GIERKE
Director

Biodynamics and Bionics Division
Aerospace Medical Research Laboratory

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| 20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The MA-8 Air Conditioner is an electric motor driven air conditioner designed to cool electronic equipment on aircraft during ground maintenance. This report provides measured data defining the bioacoustic environments produced by this unit operating inside a large aircraft hanger at normal rated conditions. Near-field data are reported for 37 locations in a wide variety of physical and psychoacoustic measures: overall and band sound pressure levels, C-weighted and A-weighted sound levels, preferred speech interference | | |

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level, perceived noise level, and limiting times for total daily exposure of personnel with and without standard Air Force ear protectors. Refer to Volume 1 of this handbook, USAF Bioenvironmental Noise Data Handbook, Vol 1: Organization, Content and Application, AMRL-TR-75-50(1) 1975, for discussion of the objective and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc.

PREFACE

This report was prepared by the Biodynamic Environment Branch, Aerospace Medical Research Laboratory, under Project/Task 723104, Measurement and Prediction of Noise Environments of Air Force Operations.

The author acknowledges the efforts of Mr. Robert T. England and Mr. Robert G. Powell who conducted the field measurements, and Mr. John N. Cole who established the data analysis requirements and assisted in the preparation of this report. Mr. Henry Mohlman and Mr. David Eilerman of the University of Dayton assisted in the mechanics of data processing, and Mrs. Norma Peachey typed and prepared the graphics.

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NEAR-FIELD NOISE

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INTRODUCTION

The MA-8 Air Conditioner is an electric motor-driven air conditioner designed to cool electronic equipment on aircraft during ground maintenance.

This volume provides measured data defining the bioacoustic environments produced by this unit. Such data are essential to evaluate ear protection requirements, limiting personnel exposure times, voice communication capabilities, and annoyance problems associated with operations of the MA-8 air conditioner.

This volume is one of a series published by the Aerospace Medical Research Laboratory (AMRL) under the same report number (AMRL-TR-75-50) as a multi-volume handbook that quantifies the noise environments produced at flight/ground crew locations and in surrounding communities by operations of Air Force aircraft and ground support equipment. The far-field, community-type, noise data in the handbook describe the noise produced during *ground operations* of aircraft, ground support equipment, and other ground-based equipment or facilities.

Volume 1 of this handbook discusses the objectives and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc. Volume 2 provides a method and data for adjusting the handbook's far-field noise data, which are for standard meteorological conditions (15C temperature, 70% rel humidity, 0.760 meters Hg barometric pressure) to derive comparable data for other meteorological conditions. Refer to Volumes 1 and 2 (references 1 and 2) for such information because it is not repeated in other handbook volumes.

A cumulative index lists those aerospace systems contained in the handbook, and identifies the specific volumes containing each type of environmental noise data available (i.e., inflight/flight crew and passenger noise, near-field/ground crew noise, far-field/community noise). Volume numbers are assigned sequentially as individual volumes are published. This index is periodically updated as individual volumes are published, and is available upon request from AMRL/BBE, Wright-Patterson AFB, OH 45433. Organizations on the distribution list for the handbook will automatically receive a copy of the updated index as it is generated.

Direct any questions concerning the technical data in this report and other handbook volumes to: AMRL/BBE, Wright-Patterson AFB, OH 45433; Autovon 78-53675 or 78-53664; Commercial (513) 255-3675 or (513) 255-3664.

1. Cole, John N., *USAF Bioenvironmental Noise Data Handbook, Volume 1: Organization, Content and Application*, AMRL-TR-75-50(1), Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio, 1975.
2. Cole, John N., *USAF Bioenvironmental Noise Data Handbook, Volume 2: Procedure to Evaluate Effects of Non-standard Meteorological Conditions on Far-Field Noise*, AMRL-TR-75-50 (2), AMRL, WPAFB, OH, 1975.

NEAR-FIELD NOISE

MEASUREMENTS

A standard MA-8 Air Conditioner was operated inside, and approximately in the center of a large aircraft hanger (190.5 m long \times 95.1 m wide \times 18.3 m high) on a concrete floor at normal rated conditions. The hanger walls and ceiling were not acoustically treated. No aircraft were in the vicinity of the unit while being measured. No far-field acoustic data were acquired because of the relatively close proximity of the hanger walls.

Figure 1 identifies 36 noise measurement locations at a height of 1.5 meters above the concrete apron (nominal ear level of ground crew). The 0 degree reference direction passes through the tow bar. These locations are in the acoustic near-field of the source where the sound wave fronts generally do not spherically diverge and the source appears to be spatially distributed (i.e., not a point source). Consequently, these near-field data cannot be extrapolated to longer distances but do properly define the levels at locations close to the unit.

Near-field measurements were also made at ear level at the operator control panel. Table 1 lists the numeric/alphabetic designators used on the data pages in this report to identify the operator measurement location and test conditions. The designator 1/A means operator location 1 and test condition A. Such a descriptor is essential in many handbook volumes that involve multiple combinations of locations/conditions. It is used in this report to maintain format consistency.

RESULTS

The measured data presented in Table 2 define the sound pressure levels (SPL) produced by the MA-8 unit at the 37 specified, near-field locations. This table includes the overall, 1/3 octave band, and octave band levels. From these data one can calculate the variety of measures in Table 3 which are widely used to assess the effects of noise on personnel and their performance.

For data at other intermediate near-field locations (i.e., for radial distances less than 4 meters) you can interpolate between the 36 measured data points.

TABLE 1
MEASUREMENT LOCATION AND TEST CONDITION
FOR OPERATOR NOISE MEASUREMENTS

MA-8 Air Conditioner, Edwards AFB, 22 Sep 1972

Measurement Location

1

Operator Control Panel

Operation

A

Vent Cycle

B

Cooling Cycle

C

Heat Cycle

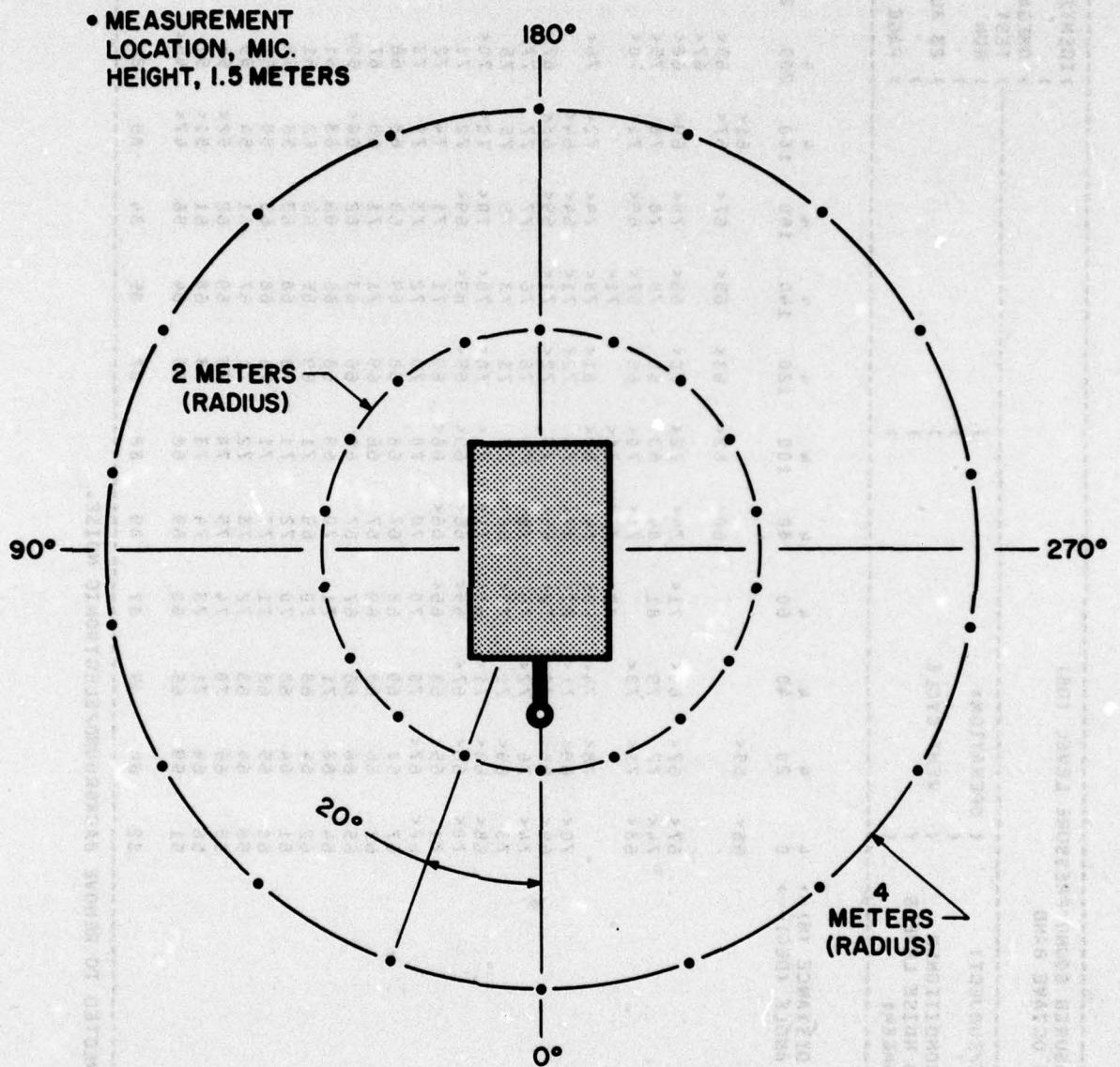


Figure 1. Measurement Locations

TABLE 2
MEASURED SOUND PRESSURE LEVEL (dB)
1/3 OCTAVE BAND

| NOISE SOURCE/SUBJECT: | | OPERATION: | | IDENTIFICATION | | | | | | | | | | | | | | |
|--|------------------|------------|-----|-----------------|-----|-----|-----------|-----|-----|--------|-----|-----|-----------|-----|-----|---------|--|--|
| NA-8 AIR CONDITIONER NEAR FIELD NOISE LEVELS (INSIDE HANGER) | | VENT CYCLE | | TEST 71-020-320 | | | OMEGA 3.2 | | | RUN 01 | | | 23 AUG 74 | | | PAGE F1 | | |
| FREQ (HZ) | DISTANCE (M) --> | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | |
| | ANGLE (DEG) --> | 0 | 20 | 40 | 60 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | | | | |
| 25 | 31.5 | 66< | 65< | | | 60< | 62< | 63< | 65< | 67< | 67< | 65< | 64< | 61< | | | | |
| 40 | | 67< | 69< | 71< | 74< | 72< | 70< | 68< | 70< | 69< | 69< | 68< | 67< | 67< | | | | |
| 50 | | 74< | 77 | 81 | 84 | 83 | 80 | 78 | 78 | 78 | 78 | 75< | 75< | 76< | | | | |
| 63 | | 71< | 70< | | 71< | 70< | 66< | 67< | 69< | 71< | 70< | 67< | 67< | 67< | | | | |
| 80 | | 68< | 71< | | 72< | 75< | 71< | 71< | 71< | 72< | 74< | 72< | 76< | 77< | | | | |
| 100 | | 78< | 74< | 80< | 84 | 82< | 81< | 78< | 78< | 74< | 72< | 72< | 76< | 77< | | | | |
| 125 | | 70< | 69< | 71< | 72< | 67< | 74 | 72< | 71< | 64< | 64< | 64< | 71< | 71< | | | | |
| 160 | | 69< | 68< | 70< | 72< | 69< | 73 | 72< | 71< | 69< | 68< | 67< | 70< | 70< | | | | |
| 200 | | 74< | 76 | 72< | 76 | 76 | 76 | 76 | 76 | 76 | 77 | 77 | 77 | 74< | | | | |
| 250 | | 73 | 69< | 71 | 70< | 68< | 73 | 73 | 73 | 75 | 75 | 75 | 75 | 72 | | | | |
| 315 | | 68< | 69< | 71< | 68< | 71< | 71< | 71< | 70< | 70< | 70< | 70< | 70< | 68< | | | | |
| 400 | | 70< | 66< | 67< | 65< | 66< | 65< | 65< | 65< | 69< | 69< | 69< | 72 | 71 | 68< | | | |
| 500 | | 71 | 65< | 68 | 65< | 66< | 66< | 66< | 66< | 69 | 71 | 74 | 72 | 71 | 68< | | | |
| 630 | | 60< | 67< | 70 | 70 | 70 | 70 | 70 | 70 | 72 | 73 | 75 | 73 | 70 | | | | |
| 800 | | 67 | 68 | 69 | 68 | 67 | 68 | 69 | 68 | 66 | 66 | 63 | 61 | 60 | | | | |
| 1000 | | 67 | 66 | 68 | 69 | 67 | 66 | 67 | 66 | 69 | 71 | 71 | 68 | 68 | 64< | | | |
| 1250 | | 67 | 65 | 68 | 69 | 67 | 66 | 67 | 66 | 66 | 63 | 62 | 60< | 62< | 61< | | | |
| 1600 | | 65 | 66 | 66 | 67 | 67 | 66 | 67 | 66 | 66 | 63 | 62 | 60< | 59< | 58< | | | |
| 2000 | | 64 | 68 | 71 | 71 | 70 | 69 | 68 | 66 | 66 | 66 | 63 | 61 | 60 | | | | |
| 2500 | | 62 | 64 | 68 | 70 | 69 | 71 | 69 | 65 | 63 | 62 | 61 | 59 | 58 | | | | |
| 3150 | | 61 | 64 | 68 | 70 | 72 | 71 | 70 | 68 | 68 | 63 | 63 | 58 | 57 | 56 | | | |
| 4000 | | 60 | 65 | 68 | 71 | 73 | 71 | 70 | 68 | 63 | 58 | 57 | 58 | 54< | | | | |
| 5000 | | 58 | 64 | 68 | 72 | 73 | 72 | 71 | 67 | 61 | 54 | 55 | 55 | 52< | | | | |
| 6300 | | 55 | 65 | 70 | 74 | 75 | 73 | 69 | 62 | 52< | 56 | 54 | 53< | | | | | |
| 8000 | | 56 | 64 | 71 | 73 | 74 | 73 | 68 | 61 | 51< | 52 | 52 | | | | | | |
| 10000 | | 51 | 59 | 65 | 68 | 69 | 68 | 66 | 64 | 56 | 47< | 46< | 50 | 49 | | | | |
| OVERALL | | 82 | 84 | 85 | 87 | 89 | 88 | 87 | 85 | 84 | 85 | 84 | 82 | 85 | | | | |

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE 1 MEASURED SOUND PRESSURE LEVEL (dB)
2 1/3 OCTAVE BAND

| NOISE SOURCE/SUBJECT: | | OPERATION: | | VENT CYCLE | | 23 AUG 74 | | PAGE F2 | |
|--|------------------|------------|-----|------------|-----|-----------|-----|---------|-----|
| MA-8 AIR CONDITIONER NEAR FIELD NOISE LEVELS (INSIDE HANGER) | | | | | | | | | |
| FREQ (HZ) | DISTANCE (M) --> | 4 | 4 | 4 | 4 | 2 | 2 | 2 | 2 |
| | ANGLE (DEG) --> | 260 | 280 | 300 | 320 | 340 | 0 | 20 | 40 |
| 25 | 60< | 70< | 72< | 71< | 66< | 72< | 73< | 76 | 78 |
| 31.5 | | | | | | | | 60< | 60< |
| 40 | 68< | 80 | 82 | 83 | 82 | 83 | 85 | 88 | 89 |
| 50 | 70< | 72< | 69< | 69< | 67< | 68< | 71< | 70< | 70< |
| 63 | 63 | 80 | 80 | 82 | 82 | 83 | 85 | 88 | 88 |
| 80 | 80 | 71< | 71< | 72< | 72< | 71< | 70< | 71< | 71< |
| 100 | 100 | 72< | 72< | 72< | 72< | 72< | 74< | 74< | 74< |
| 125 | 78< | 77< | 77< | 79< | 79< | 79< | 78< | 81< | 81< |
| 160 | 73< | 75 | 75 | 69< | 73< | 82 | 76 | 74 | 77 |
| 200 | 71< | 73 | 74 | 69< | 72< | 80 | 73 | 75 | 79 |
| 250 | 69< | 72< | 73< | 71< | 70< | 73< | 77 | 80 | 77 |
| 315 | 69< | 72 | 65< | 69< | 70< | 75 | 73 | 75 | 79 |
| 400 | 69< | 67< | 67< | 66< | 70< | 76 | 74 | 75 | 75 |
| 500 | 64< | 63< | 63< | 63< | 66< | 72 | 72 | 70< | 69< |
| 630 | 64< | 63< | 63< | 63< | 63< | 67 | 70 | 69 | 69 |
| 800 | 64< | 63< | 63< | 63< | 63< | 68 | 71 | 70 | 72 |
| 1000 | 62< | 62< | 62< | 62< | 64< | 67 | 70 | 71 | 72 |
| 1250 | 60< | 60< | 60< | 60< | 60< | 67 | 70 | 69 | 73 |
| 1600 | 57< | 58< | 58< | 63 | 65 | 68 | 66 | 71 | 73 |
| 2000 | 57< | 58< | 58< | 61 | 64 | 65 | 70 | 68 | 72 |
| 2500 | 56 | 57 | 57 | 57 | 60 | 62 | 66 | 65 | 73 |
| 3150 | 56 | 56 | 56 | 57 | 61 | 61 | 66 | 70 | 72 |
| 4000 | 56 | 54< | 56 | 56 | 60 | 61 | 66 | 71 | 71 |
| 5000 | 52< | 52< | 54 | 57 | 58 | 62 | 63 | 71 | 73 |
| 6300 | 51< | 51< | 52< | 54 | 54 | 58 | 63 | 73 | 78 |
| 8000 | 50< | 49< | 50< | 52 | 55 | 60 | 62 | 73 | 78 |
| 10000 | 47< | 45< | 47< | 51 | 53 | 57 | 57 | 67 | 76 |
| OVERALL | 84 | 85 | 86 | 84 | 82 | 89 | 88 | 90 | 93 |
| | | | | | | | | | 92 |
| | | | | | | | | | 90 |

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE I: MEASURED SOUND PRESSURE LEVEL (dB)
1/3 OCTAVE BAND

TABLE I MEASURED SOUND PRESSURE LEVEL (dB) 1/3 OCTAVE BAND IDENTIFICATION:

) OMEGA 3.2
TEST 71-020-32

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

| TABLE: MEASURED SOUND PRESSURE LEVEL (DB) | | IDENTIFICATION: | | | | | | | | | | | | |
|--|------------------|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|----|
| 2 1/3 OCTAVE BAND | | OMEGA 3.2 | | | | | | | | | | | | |
| | | TEST 71-020-320 | | | | | | | | | | | | |
| | | RUN 04 | | | | | | | | | | | | |
| | | 23 AUG 74 | | | | | | | | | | | | |
| | | PAGE F4 | | | | | | | | | | | | |
| NOISE SOURCE/SUBJECT: | | OPERATION: | | | | | | | | | | | | |
| MA-6 AIR CONDITIONER NEAR FIELD NOISE LEVELS (INSIDE HANGER) | | COOLING CYCLE | | | | | | | | | | | | |
| FREQ (HZ) | DISTANCE (M) --> | ANGLE (DEG) --> | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 25 | 61< 31.5 | 61< 65< | 70< 76< | 72< 81 | 75< 87 | 76 88 | 70< 87 | 69< 84 | 62< 80 | 66< 78 | 65< 81 | 63< 84 | 63< 84 | |
| 40 | 64< | 67< | 62< 69< | 66< 69< | 62< 69< | 60 80 | 100 120 | 120 140 | 140 160 | 160 180 | 200 220 | 220 240 | 240 240 | |
| 50 | 69< | 70< | 72< 81 | 75< 87 | 76 88 | 76 87 | 74< 84 | 72< 80 | 68< 78 | 68< 78 | 68< 81 | 68< 84 | 68< 86 | |
| 63 | 76< | 76< | 69< 69< | 67< 72< | 69< 72< | 69< 72< | 72< 74< | 72< 74< | 72< 74< | 72< 75< | 71< 75< | 71< 75< | 71< 75< | |
| 80 | 74< | 74< | 75< 75< | 72< 74< | 74< 76< | 74< 76< | 73< 73< | 73< 73< | 72< 73< | 72< 73< | 73< 74< | 73< 74< | 73< 74< | |
| 100 | 73< | 73< | 75< 75< | 72< 74< | 74< 76< | 74< 76< | 73< 74< | |
| 125 | 77< | 82< | 81< 79 | 78< 79 | 74< 79 | 74< 79 | 73< 77 | 73< 77 | 72< 75 | 73< 76 | 73< 76 | 73< 76 | 73< 76 | |
| 160 | 80 | 80 | 80 | 75 | 75 | 80 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 |
| 200 | 82 | 82 | 80 | 80 | 78 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| 250 | 86 | 87 | 85 | 76 | 76 | 77 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| 315 | 86 | 86 | 84 | 75 | 77 | 77 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |
| 400 | 500 | 63 | 61 | 78 | 73 | 71 | 72 | 74 | 72 | 75 | 73 | 75 | 71 | 71 |
| 630 | 65 | 63 | 61 | 74 | 72 | 72 | 73 | 74 | 73 | 74 | 73 | 74 | 71 | 71 |
| 800 | 86 | 84 | 83 | 78 | 74 | 75 | 73 | 73 | 72 | 72 | 72 | 72 | 70 | 70 |
| 1000 | 83 | 82 | 80 | 75 | 72 | 72 | 71 | 71 | 71 | 72 | 71 | 75 | 77 | 74 |
| 1250 | 86 | 83 | 81 | 74 | 73 | 71 | 71 | 71 | 72 | 71 | 70 | 74 | 75 | 72 |
| 1600 | 81 | 80 | 77 | 72 | 71 | 71 | 70 | 69 | 67 | 68 | 71 | 71 | 70 | 70 |
| 2000 | 82 | 80 | 77 | 73 | 72 | 70 | 69 | 68 | 67 | 66 | 72 | 70 | 69 | 69 |
| 2500 | 76 | 76 | 73 | 70 | 70 | 71 | 69 | 67 | 65 | 65 | 69 | 68 | 67 | 67 |
| 3150 | 75 | 74 | 71 | 70 | 71 | 71 | 70 | 68 | 64 | 63 | 69 | 66 | 65 | 63 |
| 4000 | 71 | 71 | 70 | 71 | 72 | 72 | 70 | 67 | 62 | 60 | 67 | 65 | 63 | 63 |
| 5000 | 67 | 69 | 69 | 72 | 73 | 73 | 70 | 67 | 62 | 56 | 64 | 62 | 59 | 59 |
| 6300 | 60 | 66 | 70 | 74 | 75 | 74 | 73 | 69 | 63 | 53 | 60 | 57 | 55 | 57 |
| 8000 | 60 | 65 | 70 | 72 | 73 | 72 | 67 | 61 | 52 | 57 | 55 | 52 | 55 | 52 |
| 10000 | 59 | 61 | 65 | 68 | 69 | 68 | 67 | 63 | 56 | 50 | 54 | 55 | 52 | 52 |
| OVERALL | 95 | 94 | 93 | 90 | 91 | 90 | 89 | 88 | 86 | 86 | 91 | 92 | 91 | 91 |

TABLE I: MEASURED SOUND PRESSURE LEVEL (dB)
1/3 OCTAVE BAND

| TABLE I MEASURED SOUND PRESSURE LEVEL (dB) 2 1/3 OCTAVE BAND | | IDENTIFICATION: OMEGA 3-2 TEST 71-020-320 RUN 05 23 AUG 74 PAGE F5 | | | | | | | | | |
|---|------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| NOISE SOURCE/SUBJECT: MA-8 AIR CONDITIONER NEAR FIELD NOISE LEVELS (INSIDE HANGER) | | OPERATION: COOLING CYCLE | | | | | | | | | |
| FREQ (HZ) | DISTANCE (M) --> | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 25 | 65< | 65< | 61< | 63< | 62< | 68< | 67< | 62< | 63< | 64< | 64< |
| 31.5 | 67 | 68 | 67 | 84 | 82 | 86 | 81 | 76 | 84 | 80 | 72< |
| 40 | 69 | 90 | 88 | 86 | 83 | 88 | 84 | 79 | 88 | 89 | 80 |
| 50 | 70< | 71< | 70< | 71< | 71< | 74< | 74< | 72< | 77 | 74< | 79 |
| 63 | 73< | 75< | 78< | 77< | 74< | 82< | 83 | 79< | 76< | 75< | 75< |
| 80 | 75< | 76< | 76< | 77< | 75< | 86 | 85 | 81< | 79< | 77< | 77< |
| 100 | 76< | 77< | 77< | 77< | 75< | 86 | 85 | 81< | 79< | 84 | 84 |
| 125 | 78 | 77 | 77 | 77 | 80 | 91 | 90 | 89 | 85 | 86 | 81 |
| 160 | 74 | 75 | 75 | 77 | 80 | 89 | 89 | 88 | 89 | 90 | 84 |
| 200 | 74< | 75< | 75< | 76< | 81 | 90 | 89 | 88 | 89 | 87 | 81 |
| 250 | 76 | 79 | 79 | 86 | 87 | 93 | 91 | 86 | 86 | 87 | 87 |
| 315 | 78 | 77 | 79 | 81 | 84 | 90 | 89 | 83 | 83 | 80 | 79 |
| 400 | 74 | 76 | 76 | 79 | 80 | 86 | 85 | 82 | 81 | 82 | 80 |
| 500 | 75 | 73 | 77 | 82 | 83 | 90 | 88 | 83 | 79 | 79 | 77 |
| 630 | 73 | 73 | 79 | 84 | 85 | 91 | 90 | 85 | 80 | 81 | 80 |
| 600 | 70 | 71 | 75 | 80 | 82 | 90 | 87 | 84 | 82 | 80 | 79 |
| 1000 | 69 | 70 | 75 | 80 | 84 | 91 | 88 | 83 | 80 | 81 | 76 |
| 1250 | 67 | 68 | 72 | 76 | 80 | 88 | 86 | 83 | 80 | 81 | 75 |
| 1600 | 66 | 67 | 71 | 77 | 81 | 87 | 85 | 82 | 78 | 76 | 74 |
| 2000 | 63 | 64 | 68 | 73 | 76 | 83 | 82 | 76 | 79 | 81 | 76 |
| 2500 | 62 | 63 | 66 | 71 | 74 | 82 | 79 | 74 | 77 | 80 | 72 |
| 3150 | 60 | 60 | 63 | 69 | 72 | 78 | 76 | 73 | 77 | 81 | 73 |
| 4000 | 57 | 57 | 61 | 66 | 67 | 74 | 73 | 71 | 76 | 79 | 71 |
| 5000 | 54 | 54 | 57 | 59 | 61 | 67 | 66 | 69 | 75 | 78 | 70 |
| 6300 | 53 | 53 | 54 | 57 | 60 | 67 | 65 | 73 | 76 | 79 | 74 |
| 8000 | 49 | 50 | 51 | 56 | 64 | 66 | 64 | 71 | 74 | 70 | 67 |
| 10000 | 92 | 93 | 93 | 94 | 94 | 97 | 97 | 97 | 97 | 96 | 92 |
| OVERALL | | 92 | 93 | 93 | 94 | 94 | 97 | 97 | 97 | 96 | 94 |

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE I
2
MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND

| NOISE SOURCE/SUBJECT | | OPERATION | | COOLING CYCLE | | | | | | TEST CONDITION | | | | | | | | | | | | | | |
|--|--------------------|-----------|-----|---------------|-----|-----|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| MA-8 AIR CONDITIONER NEAR FIELD NOISE LEVELS (INSIDE HANGER) | | | | 160 | | | 200 | | | 240 | | | 280 | | | 320 | | | 340 | | | 360 | | |
| FREQ (HZ) | ANGLE (DEG) --> | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 25 | 70< | 72< | 70< | 69< | 62< | 62< | 67< | 65< | 63< | 62< | 62< | 65< | 66< | 66< | 67< | 67< | 66< | 66< | 66< | 66< | 66< | 66< | 66< | 66< |
| 31.5 | 74< | 73< | 74< | 75< | 67< | 67< | 67< | 67< | 67< | 67< | 67< | 67< | 67< | 67< | 67< | 67< | 67< | 67< | 67< | 67< | 67< | 67< | 67< | 67< |
| 40 | 50 | 82 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 |
| 63 | 80 | 72< | 76< | 76< | 76< | 76< | 76< | 76< | 76< | 76< | 76< | 76< | 76< | 76< | 76< | 76< | 76< | 76< | 76< | 76< | 76< | 76< | 76< | 76< |
| 80 | 100 | 72< | 74< | 74< | 74< | 74< | 74< | 74< | 74< | 74< | 74< | 74< | 74< | 74< | 74< | 74< | 74< | 74< | 74< | 74< | 74< | 74< | 74< | 74< |
| 100 | 125 | 64 | 79< | 79< | 79< | 79< | 79< | 79< | 79< | 79< | 79< | 79< | 79< | 79< | 79< | 79< | 79< | 79< | 79< | 79< | 79< | 79< | 79< | 79< |
| 125 | 160 | 80 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 |
| 200 | 200 | 83 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 250 | 82 | 82 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 315 | 81 | 81 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 400 | 83 | 82 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 |
| 500 | 76 | 79 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 |
| 630 | 63 | 84 | 80 | 77 | 75 | 74 | 75 | 74 | 75 | 74 | 72 | 72 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| 800 | 80 | 82 | 80 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| 1000 | 75 | 75 | 75 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| 1250 | 76 | 75 | 75 | 72 | 72 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 |
| 1600 | 71 | 72 | 75 | 71 | 69 | 69 | 70 | 70 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| 2000 | 71 | 70 | 72 | 70 | 68 | 68 | 68 | 68 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| 2500 | 69 | 69 | 68 | 68 | 68 | 68 | 68 | 68 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| 3150 | 67 | 66 | 66 | 65 | 65 | 65 | 65 | 65 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 |
| 4000 | 66 | 64 | 64 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 |
| 5000 | 64 | 62 | 62 | 59 | 59 | 59 | 59 | 59 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 |
| 6300 | 61 | 59 | 59 | 58 | 58 | 58 | 58 | 58 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 |
| 8000 | 59 | 58 | 58 | 57 | 57 | 57 | 57 | 57 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 |
| 10000 | 56 | 55 | 55 | 54 | 54 | 54 | 54 | 54 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 |
| OVERALL | | 92 | 92 | 91 | 91 | 93 | 93 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 |

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)
2 1/3 OCTAVE BAND

| NOISE SOURCE/SUBJECT: | | OPERATION: | | HEAT CYCLE | | | | | | | | | | | | IDENTIFICATION: | |
|--|-----------------|------------|-----|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|---------------------------|-----|
| MA-8 AIR CONDITIONER NEAR FIELD NOISE LEVELS (INSIDE HANGER) | | | | | | | | | | | | | | | | TEST 71-020-320 RUN 07 | |
| FREQ (HZ) | DISTANCE (M) -> | 0 | 20 | 40 | 60 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 23 AUG 74 | PAGE F7 | |
| 25 | | | | | | | | | | | | | | | | | |
| 31.5 | | | | | | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | | | | | | |
| 50 | 67< | 71< | 72< | 70< | 66< | 68< | 66< | 67< | 68< | 66< | 67< | 70< | 72< | 73< | | | |
| 63 | 77< | 81 | 82 | 82 | 79 | 73< | 71< | 76< | 75< | 76< | 76< | 72< | 81 | 82 | | | |
| 80 | | | | | | | | | | | | | | | | | |
| 100 | | | | | | | | | | | | | | | | | |
| 125 | 79< | 81< | 75< | 75< | 80< | 78< | 77< | 77< | 77< | 77< | 77< | 65< | 65< | 71< | 68< | 68< | 68< |
| 160 | 71< | 74< | 69< | 75 | 74 | 72< | 71< | 71< | 70< | 69< | 68< | 68< | 68< | 68< | 68< | 68< | 68< |
| 200 | 69< | 70< | 71< | 71< | 74 | 74 | 71< | 70< | 69< | 68< | 68< | 68< | 68< | 68< | 68< | 68< | 68< |
| 250 | 74< | 73< | 71< | 74< | 75< | 75< | 74< | 74< | 74< | 73< | 73< | 72< | 72< | 72< | 70< | 72< | 72< |
| 315 | 71 | 67< | 69< | 71 | 70< | 71< | 71< | 71< | 70< | 71< | 71< | 70< | 72 | 72 | 72 | 72 | 72 |
| 400 | 67< | 67< | 69< | 69< | 68< | 68< | 68< | 68< | 68< | 69< | 67< | 70< | 67< | 69< | 68< | 68< | 68< |
| 500 | 65< | 66< | 66< | 69< | 68< | 68< | 67< | 69< | 70< | 71 | 71 | 72 | 71 | 75 | 76 | 76 | 74 |
| 630 | 66< | 65< | 68 | 67 | 69 | 70 | 70 | 70 | 71 | 71 | 73 | 72 | 73 | 74 | 72 | 72 | 72 |
| 800 | 68< | 67< | 69 | 69 | 70 | 70 | 70 | 70 | 71 | 71 | 73 | 72 | 73 | 74 | 72 | 72 | 72 |
| 1000 | 65< | 67 | 69 | 68 | 68 | 68 | 68 | 68 | 70 | 70 | 67 | 67 | 69 | 66 | 66 | 66 | 66 |
| 1250 | 68 | 68 | 69 | 70 | 69 | 68 | 68 | 69 | 69 | 69 | 69 | 69 | 69 | 64 | 68 | 63 | 64 |
| 1600 | 63 | 66 | 69 | 69 | 69 | 67 | 67 | 64 | 62 | 60< | 60< | 60< | 60< | 63 | 64 | 64 | 64 |
| 2000 | 64 | 69 | 71 | 70 | 70 | 68 | 65 | 63 | 60 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 64 |
| 2500 | 63 | 66 | 69 | 71 | 71 | 73 | 70 | 66 | 64 | 58 | 60 | 61 | 63 | | | | |
| 3150 | 61 | 64 | 70 | 71 | 73 | 72 | 70 | 68 | 62 | 56 | 58 | 58 | 60 | | | | |
| 4000 | 60 | 63 | 67 | 70 | 72 | 72 | 70 | 66 | 61 | 56 | 57 | 59 | | | | | |
| 5000 | 57 | 63 | 68 | 71 | 72 | 72 | 70 | 67 | 60 | 53< | 55 | 55 | 57 | | | | |
| 6300 | 54 | 62 | 66 | 70 | 72 | 72 | 70 | 66 | 60 | 50< | 55 | 54 | 56 | | | | |
| 8000 | 53 | 60 | 66 | 69 | 70 | 70 | 68 | 64 | 56 | 47< | 50< | 50< | 54 | | | | |
| 10000 | 50 | 55 | 62 | 65 | 66 | 67 | 65 | 62 | 53 | 46< | 44< | 47< | 51 | | | | |
| OVERALL | | 83 | 85 | 85 | 86 | 86 | 86 | 84 | 84 | 82 | 82 | 83 | 85 | 84 | | | |

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

NOTE: 20000 CONDUCTED TESTS

7-2 OCTAVE BAND
TEST 71-020-320
RUN 07
1974

TABLE I MEASURED SOUND PRESSURE LEVEL (dB)

2 1/3 OCTAVE BAND

| NOISE SOURCE/SUBJECT | | OPERATION | | IDENTIFICATION | |
|--|-----------------|-------------------|-----|-----------------|-----|
| MA-8 AIR CONDITIONER NEAR FIELD NOISE LEVELS (INSIDE HANGER) | | HEAT CYCLE | | TEST 71-020-320 | |
| | | | | RUN 06 | |
| | | 23 AUG 74 | | PAGE F8 | |
| FREQ (HZ) | ANGLE (DEG)---> | DISTANCE (IN)---> | 4 | 4 | 60 |
| 25 | 31.5 | 72< | 72< | 69< | 72< |
| 40 | 50 | 82 | 81 | 79 | 76< |
| 63 | 80 | 72< | 71< | 68< | 82 |
| 100 | 100 | 70< | 71< | 68< | 76< |
| 125 | 125 | 75< | 73< | 70< | 77< |
| 160 | 65< | 67< | 68< | 70< | 83 |
| 200 | 66< | 67< | 67< | 69< | 86 |
| 250 | 69< | 70< | 69< | 71< | 82 |
| 315 | 71 | 69< | 67< | 70< | 80< |
| 400 | 68< | 67< | 67< | 70< | 85 |
| 500 | 65< | 66< | 65< | 66< | 85 |
| 630 | 66< | 70 | 66< | 69 | 82 |
| 800 | 66< | 69 | 69 | 68< | 79 |
| 1000 | 67 | 67 | 67 | 70 | 79 |
| 1250 | 68 | 68 | 68 | 72 | 80 |
| 1600 | 65 | 67 | 66 | 69 | 81 |
| 2000 | 64 | 65 | 66 | 67 | 79 |
| 2500 | 64 | 65 | 65 | 65 | 75 |
| 3150 | 63 | 64 | 64 | 64 | 75 |
| 4000 | 61 | 62 | 62 | 63 | 76 |
| 5000 | 59 | 60 | 59 | 60 | 76 |
| 6300 | 57 | 58 | 58 | 57 | 76 |
| 8000 | 55 | 56 | 55 | 55 | 74 |
| 10000 | 52 | 53 | 52 | 52 | 73 |
| OVERALL | | 84 | 84 | 83 | 91 |
| | | | | | 93 |
| | | | | | 91 |
| | | | | | 90 |

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE I MEASURED SOUND PRESSURE LEVEL (DB)
2 1/3 OCTAVE BAND

| NOISE SOURCE/SUBJECT: | | OPERATION: | | DISTANCE (M) --> | | | | | | LOCATION | | | | | |
|--|-----------------|------------|-----|------------------|-----|-----|-----|-----|-----|----------|-----|-----|-----|-----|-----|
| NA-8 AIR CONDITIONER NEAR FIELD NOISE LEVELS (INSIDE HANGER) | | HEAT CYCLE | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| FREQ (HZ) | ANGLE (DEG) --> | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 360 | 380 | 390 | 400 |
| 25 | 71< | 69< | 66< | 64< | | | | | | | | | | | 61< |
| 31.5 | 71< | 69< | 66< | 64< | | | | | | | | | | | 62< |
| 40 | 71< | 69< | 67< | 72< | 74< | 75< | 75< | 75< | 72< | 65< | 61 | 72< | 64 | 61 | 62 |
| 50 | 71< | 77< | 78 | 81 | 83 | 86 | 84 | 84 | 81 | 72< | 71< | 71< | 71< | 73< | 73< |
| 63 | 71< | 75< | 73< | 71< | 69< | 69< | 72< | 72< | 74< | 74< | 76< | 76< | 76< | 69< | 69< |
| 80 | 76< | 75< | 75< | 75< | 72< | 72< | 72< | 72< | 72< | 72< | 72< | 72< | 72< | 72< | 75< |
| 100 | 82< | 81< | 81< | 81< | 79< | 75< | 77< | 77< | 77< | 77< | 77< | 77< | 77< | 77< | 73< |
| 125 | 76 | 72< | 73< | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 75< |
| 160 | 77 | 74 | 72< | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74< |
| 200 | 77 | 75< | 72< | 73< | 73< | 74< | 75< | 75< | 75< | 75< | 75< | 75< | 75< | 75< | 74< |
| 250 | 76 | 75 | 75 | 74 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 75< |
| 315 | 76 | 75 | 75 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 75< |
| 400 | 76 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74< |
| 500 | 77 | 74 | 72 | 69< | 69< | 69< | 69< | 69< | 72 | 71 | 70< | 70< | 70< | 70< | 72< |
| 630 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84< |
| 800 | 83 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82< |
| 1000 | 76 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74< |
| 1250 | 77 | 70 | 71 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 71< |
| 1600 | 67 | 67 | 69 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 69< |
| 2000 | 69 | 64 | 66 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 68< |
| 2500 | 67 | 64 | 65 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 68< |
| 3150 | 64 | 61 | 62 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 67< |
| 4000 | 63 | 59 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 67< |
| 5000 | 60 | 58 | 61 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 63< |
| 6300 | 58 | 55 | 60 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 61< |
| 8000 | 55 | 53 | 57 | 57 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 61< |
| 10000 | 53 | 51 | 52 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 56< |
| OVERALL | 90 | 89 | 88 | 87 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86< |

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: MEASURED SOUND PRESSURE LEVEL (dB)

2 OCTAVE BAND

| NOISE SOURCE/SUBJECT | | OPERATIONS | | VENT CYCLE | | | | | | | | | |
|----------------------|------------------------------------|------------|----|------------|----|----|----|----|----|----|----|----|----|
| FREQ (HZ) | DISTANCE (M) -> ANGLE (DEG) --> | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 31.5 | 76 | 78 | 80 | 82 | 84 | 84 | 84 | 81 | 79 | 79 | 79 | 77 | 70 |
| 63 | 78 | 81 | 84 | 83 | 82 | 79 | 79 | 74 | 73 | 73 | 76 | 82 | 77 |
| 125 | 77 | 76 | 76 | 77 | 79 | 78 | 79 | 79 | 79 | 79 | 79 | 77 | 76 |
| 250 | 75 | 72 | 74 | 71 | 73 | 73 | 73 | 75 | 75 | 77 | 76 | 74 | 72 |
| 500 | 72 | 72 | 74 | 73 | 73 | 73 | 74 | 75 | 75 | 76 | 75 | 73 | 72 |
| 1000 | 69 | 71 | 74 | 74 | 73 | 73 | 74 | 72 | 69 | 68 | 66 | 65 | 63 |
| 2000 | 64 | 69 | 73 | 76 | 77 | 76 | 75 | 73 | 67 | 62 | 61 | 59 | 56 |
| 4000 | 59 | 68 | 74 | 77 | 78 | 77 | 77 | 72 | 65 | 55 | 56 | 57 | 56 |
| OVERALL | 62 | 64 | 85 | 87 | 89 | 88 | 87 | 85 | 84 | 85 | 83 | 82 | 85 |

TABLE I
MEASURED SOUND PRESSURE LEVEL (dB)
OCTAVE BAND

| TABLE I MEASURED SOUND PRESSURE LEVEL (DB) | | IDENTIFICATION: | |
|--|----|-------------------|----|
| 2 OCTAVE BAND | | TEST 71-020-320 | |
| NOISE SOURCE/SUBJECT: | | RUN 03 | |
| MA-8 AIR CONDITIONER NEAR FIELD NOISE LEVELS (INSIDE HANGER) | | 23 AUG 74 | |
| | | PAGE J3 | |
| DISTANCE (M) -> | | VENT CYCLE | |
| ANGLE (DEG) -> | | 260 | |
| 160 | | 280 | |
| 180 | | 300 | |
| 200 | | 320 | |
| 220 | | 340 | |
| 240 | | OPERATOR LOCATION | |
| 260 | | 1/A | |
| 280 | | 2 | |
| 300 | | 2 | |
| 320 | | 2 | |
| 340 | | 2 | |
| FREQ (HZ) | | TEST CONDITION | |
| 31.5 | | 1/A | |
| 63 | 76 | 76 | 70 |
| 125 | 82 | 82 | 77 |
| 250 | 84 | 82 | 81 |
| 500 | 83 | 83 | 80 |
| 1000 | 84 | 82 | 77 |
| 2000 | 72 | 70 | 67 |
| 4000 | 68 | 64 | 66 |
| 8000 | 63 | 58 | 59 |
| OVERALL | | 91 | 89 |
| 91 | | 86 | 84 |
| 89 | | 87 | 87 |
| 86 | | 89 | 89 |
| 84 | | 87 | 87 |
| 87 | | 89 | 89 |
| 89 | | 86 | 86 |
| 87 | | 87 | 87 |
| 89 | | 86 | 86 |

TABLE I
MEASURED SOUND PRESSURE LEVEL (dB)
OCTAVE BAND

IDENTIFICATIONS

1) OMEGA 3.2
1) TEST 71-020-320
1) BIN 04

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1 23 AUG 74

— 2 —

AC 3946 (1)

100

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240 022 002

74 75 76

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80 82 82

82 84 86

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61 75

17

62 63 59

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16 26 16

卷之三

TABLE I MEASURED SOUND PRESSURE LEVEL (dB)
OCTAVE BAND

| TABLE I MEASURED SOUND PRESSURE LEVEL (DB) | | | | | | | | | |
|--|-----------------|------------|----|---------------|----|-----------|-----|---------|----|
| 2 OCTAVE BAND | | | | | | | | | |
| NOISE SOURCE/SUBJECT: | | OPERATIONS | | COOLING CYCLE | | 23 AUG 74 | | PAGE J5 | |
| MA-8 AIR CONDITIONER NEAR FIELD NOISE LEVELS (INSIDE HANGER) | | | | | | | | | |
| FREQ (HZ) | ANGLE (DEG) --> | 6 | 4 | 4 | 4 | 2 | 2 | 2 | 2 |
| 31.5 | 91 | 92 | 91 | 88 | 75 | 73 | 72 | 72 | 72 |
| 63 | 80 | 81 | 82 | 82 | 82 | 86 | 81 | 90 | 88 |
| 125 | 79 | 82 | 82 | 87 | 89 | 95 | 92 | 93 | 91 |
| 250 | 80 | 79 | 82 | 86 | 87 | 94 | 93 | 88 | 85 |
| 500 | 76 | 76 | 82 | 87 | 89 | 95 | 93 | 89 | 85 |
| 1000 | 71 | 71 | 75 | 80 | 84 | 91 | 89 | 83 | 84 |
| 2000 | 65 | 65 | 69 | 74 | 76 | 83 | 81 | 77 | 85 |
| 4000 | 57 | 57 | 59 | 62 | 64 | 71 | 70 | 78 | 81 |
| 8000 | | | | | | | | | |
| OVERALL | | 92 | 93 | 93 | 94 | 94 | 101 | 100 | 97 |

| TABLE I MEASURED SOUND PRESSURE LEVEL (DB) | | IDENTIFICATION | | | | | | | | |
|--|--|------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| 2 OCTAVE BAND | | TEST 71-020-320 | | | | | | | | |
| NOISE SOURCE/SUBJECT | | OPERATION: | | | | | | | | |
| MA-8 AIR CONDITIONER NEAR FIELD NOISE LEVELS (INSIDE HANGER) | | COOLING CYCLE | | | | | | | | |
| FREQ (HZ) | | DISTANCE (M) --> | | | | | | | | |
| ANGLE (DEG) --> | | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 |
| 31.5 | | 77 | 77 | 74 | 73 | 71 | 71 | 72 | 72 | 70 |
| 63 | | 63 | 65 | 64 | 60 | 93 | 93 | 86 | 86 | 86 |
| 125 | | 86 | 83 | 83 | 84 | 85 | 81 | 84 | 87 | 89 |
| 250 | | 87 | 85 | 85 | 85 | 83 | 83 | 86 | 86 | 84 |
| 500 | | 86 | 87 | 84 | 63 | 61 | 61 | 62 | 67 | 91 |
| 1000 | | 82 | 83 | 82 | 79 | 76 | 76 | 77 | 87 | 93 |
| 2000 | | 75 | 75 | 76 | 74 | 72 | 72 | 73 | 81 | 89 |
| 4000 | | 70 | 69 | 74 | 68 | 67 | 68 | 68 | 72 | 81 |
| 8000 | | 64 | 62 | 69 | 63 | 60 | 61 | 62 | 69 | 65 |
| OVERALL | | 92 | 92 | 91 | 93 | 94 | 94 | 95 | 95 | 90 |
| | | | | | | | | | | |

| TABLE I MEASURED SOUND PRESSURE LEVEL (DB) | | IDENTIFICATION: | | | | | | | | | |
|--|-----------------|-----------------|----|----|----|----|-----|-----|-----|-----|-----|
| 2 OCTAVE BAND | | OMEGA 3.2 | | | | | | | | | |
| | | TEST 71-020-320 | | | | | | | | | |
| NOISE SOURCE/SUBJECT: | | RUN 07 | | | | | | | | | |
| MA-8 AIR CONDITIONER | | 23 AUG 74 | | | | | | | | | |
| NEAR FIELD NOISE LEVELS | | PAGE J7 | | | | | | | | | |
| (INSIDE HANGER) | | | | | | | | | | | |
| FREQ (HZ) | DISTANCE (M) -> | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | ANGLE (DEG) --> | 0 | 20 | 40 | 60 | 80 | 100 | 120 | 140 | 160 | 180 |
| 31.5 | | 77 | 81 | 82 | 82 | 79 | 74 | 77 | 77 | 68 | 64 |
| 63 | | 82 | 77 | 77 | 78 | 81 | 79 | 79 | 76 | 79 | 82 |
| 125 | | 80 | 75 | 75 | 77 | 78 | 78 | 77 | 76 | 76 | 76 |
| 250 | | 77 | 75 | 75 | 77 | 78 | 78 | 77 | 76 | 76 | 75 |
| 500 | | 71 | 71 | 72 | 73 | 73 | 73 | 74 | 75 | 75 | 75 |
| 1000 | | 72 | 72 | 73 | 74 | 74 | 73 | 74 | 76 | 75 | 73 |
| 2000 | | 68 | 72 | 74 | 75 | 75 | 76 | 73 | 70 | 68 | 67 |
| 4000 | | 64 | 68 | 73 | 75 | 77 | 77 | 75 | 72 | 66 | 64 |
| 8000 | | 57 | 65 | 71 | 73 | 74 | 74 | 73 | 69 | 62 | 56 |
| OVERALL | | 83 | 85 | 85 | 86 | 86 | 84 | 83 | 82 | 82 | 85 |
| | | | | | | | | | | | 84 |

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)
2 OCTAVE BAND

| NOISE SOURCE/SUBJECT: | OPERATIONS |
|--|------------|
| HA-8 AIR CONDITIONER NEAR FIELD NOISE LEVELS (INSIDE HANGER) | HEAT CYCLE |

| FREQ (HZ) | DISTANCE (M) --> ANGLE (DEG) --> | 4 | 4 | 4 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
|--------------|-------------------------------------|----|----|----|----|----|----|----|----|----|----|----|
| 31.5 | | 82 | 83 | 82 | 79 | 77 | 82 | 87 | 90 | 88 | 85 | 79 |
| 63 | | 75 | 74 | 75 | 77 | 90 | 69 | 84 | 84 | 87 | 87 | 76 |
| 125 | | 74 | 73 | 73 | 75 | 76 | 82 | 83 | 86 | 87 | 86 | 85 |
| 250 | | 71 | 71 | 72 | 71 | 72 | 77 | 77 | 76 | 80 | 81 | 82 |
| 500 | | 72 | 73 | 73 | 73 | 72 | 77 | 76 | 80 | 80 | 81 | 82 |
| 1000 | | 69 | 70 | 70 | 71 | 70 | 74 | 73 | 77 | 80 | 80 | 79 |
| 2000 | | 66 | 67 | 67 | 66 | 66 | 70 | 69 | 75 | 81 | 82 | 77 |
| 4000 | | 60 | 61 | 60 | 59 | 62 | 72 | 62 | 72 | 81 | 81 | 77 |
| 8000 | OVERALL | 84 | 84 | 84 | 82 | 81 | 91 | 91 | 93 | 94 | 93 | 90 |

| TABLE: MEASURED SOUND PRESSURE LEVEL (DB) 2 OCTAVE BAND | |) IDENTIFICATION: | |
|--|------------------------------------|--|------|
| NOISE SOURCE/SUBJECT: (OPERATION: | |) OMEGA 3.2 TEST 71-020-320 RUN 09 | |
| MA-8 AIR CONDITIONER NEAR FIELD NOISE LEVELS (INSIDE HANGER) | |) HEAT CYCLE 23 AUG 74 PAGE J9 | |
| FREQ (HZ) | DISTANCE (M) -> ANGLE (DEG) --> | 200 | 200 |
| 31.5 | 2 | 72 | 72 |
| 63 | 160 | 80 | 82 |
| 125 | 160 | 83 | 82 |
| 250 | 160 | 79 | 78 |
| 500 | 160 | 85 | 80 |
| 1000 | 160 | 84 | 83 |
| 2000 | 160 | 73 | 74 |
| 4000 | 160 | 67 | 66 |
| 8000 | 60 | 58 | 62 |
| OVERALL | 90 | 89 | 86 |
| | | 220 | 220 |
| | | 240 | 240 |
| | | 260 | 260 |
| | | 280 | 280 |
| | | 300 | 300 |
| | | 320 | 320 |
| | | 340 | 340 |
| | | 360 | 360 |
| | | 380 | 380 |
| | | 400 | 400 |
| | | 420 | 420 |
| | | 440 | 440 |
| | | 460 | 460 |
| | | 480 | 480 |
| | | 500 | 500 |
| | | 520 | 520 |
| | | 540 | 540 |
| | | 560 | 560 |
| | | 580 | 580 |
| | | 600 | 600 |
| | | 620 | 620 |
| | | 640 | 640 |
| | | 660 | 660 |
| | | 680 | 680 |
| | | 700 | 700 |
| | | 720 | 720 |
| | | 740 | 740 |
| | | 760 | 760 |
| | | 780 | 780 |
| | | 800 | 800 |
| | | 820 | 820 |
| | | 840 | 840 |
| | | 860 | 860 |
| | | 880 | 880 |
| | | 900 | 900 |
| | | 920 | 920 |
| | | 940 | 940 |
| | | 960 | 960 |
| | | 980 | 980 |
| | | 1000 | 1000 |
| | | 1020 | 1020 |
| | | 1040 | 1040 |
| | | 1060 | 1060 |
| | | 1080 | 1080 |
| | | 1100 | 1100 |
| | | 1120 | 1120 |
| | | 1140 | 1140 |
| | | 1160 | 1160 |
| | | 1180 | 1180 |
| | | 1200 | 1200 |
| | | 1220 | 1220 |
| | | 1240 | 1240 |
| | | 1260 | 1260 |
| | | 1280 | 1280 |
| | | 1300 | 1300 |
| | | 1320 | 1320 |
| | | 1340 | 1340 |
| | | 1360 | 1360 |
| | | 1380 | 1380 |
| | | 1400 | 1400 |
| | | 1420 | 1420 |
| | | 1440 | 1440 |
| | | 1460 | 1460 |
| | | 1480 | 1480 |
| | | 1500 | 1500 |
| | | 1520 | 1520 |
| | | 1540 | 1540 |
| | | 1560 | 1560 |
| | | 1580 | 1580 |
| | | 1600 | 1600 |
| | | 1620 | 1620 |
| | | 1640 | 1640 |
| | | 1660 | 1660 |
| | | 1680 | 1680 |
| | | 1700 | 1700 |
| | | 1720 | 1720 |
| | | 1740 | 1740 |
| | | 1760 | 1760 |
| | | 1780 | 1780 |
| | | 1800 | 1800 |
| | | 1820 | 1820 |
| | | 1840 | 1840 |
| | | 1860 | 1860 |
| | | 1880 | 1880 |
| | | 1900 | 1900 |
| | | 1920 | 1920 |
| | | 1940 | 1940 |
| | | 1960 | 1960 |
| | | 1980 | 1980 |
| | | 2000 | 2000 |
| | | 2020 | 2020 |
| | | 2040 | 2040 |
| | | 2060 | 2060 |
| | | 2080 | 2080 |
| | | 2100 | 2100 |
| | | 2120 | 2120 |
| | | 2140 | 2140 |
| | | 2160 | 2160 |
| | | 2180 | 2180 |
| | | 2200 | 2200 |
| | | 2220 | 2220 |
| | | 2240 | 2240 |
| | | 2260 | 2260 |
| | | 2280 | 2280 |
| | | 2300 | 2300 |
| | | 2320 | 2320 |
| | | 2340 | 2340 |
| | | 2360 | 2360 |
| | | 2380 | 2380 |
| | | 2400 | 2400 |
| | | 2420 | 2420 |
| | | 2440 | 2440 |
| | | 2460 | 2460 |
| | | 2480 | 2480 |
| | | 2500 | 2500 |
| | | 2520 | 2520 |
| | | 2540 | 2540 |
| | | 2560 | 2560 |
| | | 2580 | 2580 |
| | | 2600 | 2600 |
| | | 2620 | 2620 |
| | | 2640 | 2640 |
| | | 2660 | 2660 |
| | | 2680 | 2680 |
| | | 2700 | 2700 |
| | | 2720 | 2720 |
| | | 2740 | 2740 |
| | | 2760 | 2760 |
| | | 2780 | 2780 |
| | | 2800 | 2800 |
| | | 2820 | 2820 |
| | | 2840 | 2840 |
| | | 2860 | 2860 |
| | | 2880 | 2880 |
| | | 2900 | 2900 |
| | | 2920 | 2920 |
| | | 2940 | 2940 |
| | | 2960 | 2960 |
| | | 2980 | 2980 |
| | | 3000 | 3000 |
| | | 3020 | 3020 |
| | | 3040 | 3040 |
| | | 3060 | 3060 |
| | | 3080 | 3080 |
| | | 3100 | 3100 |
| | | 3120 | 3120 |
| | | 3140 | 3140 |
| | | 3160 | 3160 |
| | | 3180 | 3180 |
| | | 3200 | 3200 |
| | | 3220 | 3220 |
| | | 3240 | 3240 |
| | | 3260 | 3260 |
| | | 3280 | 3280 |
| | | 3300 | 3300 |
| | | 3320 | 3320 |
| | | 3340 | 3340 |
| | | 3360 | 3360 |
| | | 3380 | 3380 |
| | | 3400 | 3400 |
| | | 3420 | 3420 |
| | | 3440 | 3440 |
| | | 3460 | 3460 |
| | | 3480 | 3480 |
| | | 3500 | 3500 |
| | | 3520 | 3520 |
| | | 3540 | 3540 |
| | | 3560 | 3560 |
| | | 3580 | 3580 |
| | | 3600 | 3600 |
| | | 3620 | 3620 |
| | | 3640 | 3640 |
| | | 3660 | 3660 |
| | | 3680 | 3680 |
| | | 3700 | 3700 |
| | | 3720 | 3720 |
| | | 3740 | 3740 |
| | | 3760 | 3760 |
| | | 3780 | 3780 |
| | | 3800 | 3800 |
| | | 3820 | 3820 |
| | | 3840 | 3840 |
| | | 3860 | 3860 |
| | | 3880 | 3880 |
| | | 3900 | 3900 |
| | | 3920 | 3920 |
| | | 3940 | 3940 |
| | | 3960 | 3960 |
| | | 3980 | 3980 |
| | | 4000 | 4000 |
| | | 4020 | 4020 |
| | | 4040 | 4040 |
| | | 4060 | 4060 |
| | | 4080 | 4080 |
| | | 4100 | 4100 |
| | | 4120 | 4120 |
| | | 4140 | 4140 |
| | | 4160 | 4160 |
| | | 4180 | 4180 |
| | | 4200 | 4200 |
| | | 4220 | 4220 |
| | | 4240 | 4240 |
| | | 4260 | 4260 |
| | | 4280 | 4280 |
| | | 4300 | 4300 |
| | | 4320 | 4320 |
| | | 4340 | 4340 |
| | | 4360 | 4360 |
| | | 4380 | 4380 |
| | | 4400 | 4400 |
| | | 4420 | 4420 |
| | | 4440 | 4440 |
| | | 4460 | 4460 |
| | | 4480 | 4480 |
| | | 4500 | 4500 |
| | | 4520 | 4520 |
| | | 4540 | 4540 |
| | | 4560 | 4560 |
| | | 4580 | 4580 |
| | | 4600 | 4600 |
| | | 4620 | 4620 |
| | | 4640 | 4640 |
| | | 4660 | 4660 |
| | | 4680 | 4680 |
| | | 4700 | 4700 |
| | | 4720 | 4720 |
| | | 4740 | 4740 |
| | | 4760 | 4760 |
| | | 4780 | 4780 |
| | | 4800 | 4800 |
| | | 4820 | 4820 |
| | | 4840 | 4840 |
| | | 4860 | 4860 |
| | | 4880 | 4880 |
| | | 4900 | 4900 |
| | | 4920 | 4920 |
| | | 4940 | 4940 |
| | | 4960 | 4960 |
| | | 4980 | 4980 |
| | | 5000 | 5000 |
| | | 5020 | 5020 |
| | | 5040 | 5040 |
| | | 5060 | 5060 |
| | | 5080 | 5080 |
| | | 5100 | 5100 |
| | | 5120 | 5120 |
| | | 5140 | 5140 |
| | | 5160 | 5160 |
| | | 5180 | 5180 |
| | | 5200 | 5200 |
| | | 5220 | 5220 |
| | | 5240 | 5240 |
| | | 5260 | 5260 |
| | | 5280 | 5280 |
| | | 5300 | 5300 |
| | | 5320 | 5320 |
| | | 5340 | 5340 |
| | | 5360 | 5360 |
| | | 5380 | 5380 |
| | | 5400 | 5400 |
| | | 5420 | 5420 |
| | | 5440 | 5440 |
| | | 5460 | 5460 |
| | | 5480 | 5480 |
| | | 5500 | 5500 |
| | | 5520 | 5520 |
| | | 5540 | 5540 |
| | | 5560 | 5560 |
| | | 5580 | 5580 |
| | | 5600 | 5600 |
| | | 5620 | 5620 |
| | | 5640 | 5640 |
| | | 5660 | 5660 |
| | | 5680 | 5680 |
| | | 5700 | 5700 |
| | | 5720 | 5720 |
| | | 5740 | 5740 |
| | | 5760 | 5760 |
| | | 5780 | 5780 |
| | | 5800 | 5800 |
| | | 5820 | 5820 |
| | | 5840 | 5840 |
| | | 5860 | 5860 |
| | | 5880 | 5880 |
| | | 5900 | 5900 |
| | | 5920 | 5920 |
| | | 5940 | 5940 |
| | | 5960 | 5960 |
| | | 5980 | 5980 |
| | | 6000 | 6000 |
| | | 6020 | 6020 |
| | | 6040 | 6040 |
| | | 6060 | 6060 |
| | | 6080 | 6080 |
| | | 6100 | 6100 |
| | | 6120 | 6120 |
| | | 6140 | 6140 |
| | | 6160 | 6160 |
| | | 6180 | 6180 |
| | | 6200 | 6200 |
| | | 6220 | 6220 |
| | | 6240 | 6240 |
| | | 6260 | 6260 |
| | | 6280 | 6280 |
| | | 6300 | 6300 |
| | | 6320 | 6320 |
| | | 6340 | 6340 |
| | | 6360 | 6360 |
| | | 6380 | 6380 |
| | | 6400 | 6400 |
| | | 6420 | 6420 |
| | | 6440 | 6440 |
| | | 6460 | 6460 |
| | | 6480 | 6480 |
| | | 6500 | 6500 |
| | | 6520 | 6520 |
| | | 6540 | 6540 |
| | | 6560 | 6560 |
| | | 6580 | 6580 |
| | | 6600 | 6600 |
| | | 6620 | 6620 |
| | | 6640 | 6640 |
| | | 6660 | 6660 |
| | | 6680 | 6680 |
| | | 6700 | 6700 |
| | | 6720 | 6720 |
| | | 6740 | 6740 |
| | | 6760 | 6760 |
| | | 6780 | 6780 |
| | | 6800 | 6800 |
| | | 6820 | 6820 |
| | | 6840 | 6840 |
| | | 6860 | 6860 |
| | | 6880 | 6880 |
| | | 6900 | 6900 |
| | | 6920 | 6920 |
| | | 6940 | 6940 |
| | | 6960 | 6960 |
| | | 6980 | 6980 |
| | | 7000 | 7000 |
| | | 7020 | 7020 |
| | | 7040 | 7040 |
| | | 7060 | 7060 |
| | | 7080 | 7080 |
| | | 7100 | 7100 |
| | | 7120 | 7120 |
| | | 7140 | 7140 |
| | | 7160 | 7160 |
| | | 7180 | 7180 |
| | | 7200 | 7200 |
| | | 7220 | 7220 |
| | | 7240 | 7240 |
| | | 7260 | 7260 |
| | | 7280 | 7280 |
| | | 7300 | 7300 |
| | | 7320 | 7320 |
| | | 7340 | 7340 |
| | | 7360 | 7360 |
| | | 7380 | 7380 |
| | | 7400 | 7400 |
| | | 7420 | 7420 |
| | | 7440 | 7440 |
| | | 7460 | 7460 |
| | | 7480 | 7480 |
| | | 7500 | 7500 |
| | | 7520 | 7520 |
| | | 7540 | 7540 |
| | | 7560 | 7560 |
| | | 7580 | 7580 |
| | | 7600 | 7600 |
| | | 7620 | 7620 |
| | | 7640 | 7640 |
| | | 7660 | 7660 |
| | | 7680 | 7680 |
| | | 7700 | 7700 |
| | | 7720 | 7720 |
| | | 7740 | 7740 |
| | | 7760 | 7760 |
| | | 7780 | 7780 |
| | | 7800 | 7800 |
| | | 7820 | 7820 |
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TABLE I MEASURES OF HUMAN NOISE EXPOSURE

3

| NOISE SOURCE/SUBJECT: | | OPERATION: | | IDENTIFICATION: | | | | | | | | | | |
|--|--|--|-----|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| MA-6 AIR CONDITIONER NEAR FIELD NOISE LEVELS (INSIDE HANGER) | | VENT CYCLE | | TEST 71-020-320 RUN 01 23 AUG 74 PAGE H1 | | | | | | | | | | |
| DISTANCE (M) -> | ANGLE (DEG) --> | 0 | 20 | 40 | 60 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 |
| HAZARD/PROTECTION | C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DB) | AT EAR | | | | | | | | | | | | |
| | A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DB) | AT EAR | | | | | | | | | | | | |
| | MAXIMUM PERMISSIBLE TIME (T IN MINUTES) | FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) | | | | | | | | | | | | |
| NO PROTECTION | | | | | | | | | | | | | | |
| OASLC | 82 | 84 | 86 | 88 | 88 | 88 | 88 | 88 | 85 | 84 | 84 | 84 | 82 | 84 |
| OASLA | 77 | 78 | 81 | 82 | 83 | 82 | 82 | 80 | 79 | 79 | 79 | 78 | 77 | 76 |
| T | 960 | 960 | 967 | 679 | 571 | 679 | 679 | 679 | 960 | 960 | 960 | 960 | 960 | 960 |
| MINIMUM QPL EAR MUFFS | 58 | 60 | 60 | 63 | 65 | 64 | 63 | 63 | 62 | 60 | 60 | 60 | 59 | 62 |
| OASLA* | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 |
| T | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 |
| AMERICAN OPTICAL 1700 EAR MUFFS | 54 | 56 | 56 | 59 | 61 | 61 | 59 | 59 | 57 | 56 | 56 | 56 | 54 | 56 |
| OASLA* | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 |
| T | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 |
| V-51R EAR PLUGS | 54 | 53 | 55 | 55 | 56 | 56 | 56 | 56 | 56 | 56 | 57 | 56 | 54 | 53 |
| OASLA* | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 |
| T | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 |
| AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS | 39 | 40 | 42 | 43 | 45 | 44 | 43 | 43 | 42 | 42 | 42 | 41 | 40 | 40 |
| OASLA* | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 |
| T | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 |
| H-133 GROUND COMMUNICATION UNIT | 50 | 52 | 54 | 55 | 57 | 56 | 55 | 54 | 52 | 52 | 51 | 50 | 51 | 53 |
| OASLA* | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 |
| T | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 |
| COMMUNICATION PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB) | 72 | 72 | 74 | 73 | 73 | 73 | 73 | 73 | 73 | 73 | 72 | 71 | 69 | |
| PSIL | | | | | | | | | | | | | | |
| ANNOYANCE | PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB) | | | | | | | | | | | | | |
| | TONE CORRECTION (C IN DB) | 90 | 93 | 96 | 98 | 100 | 99 | 98 | 96 | 93 | 91 | 90 | 89 | 90 |
| | PNLT | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 |
| | C | | | | | | | | | | | | | |

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.

TABLE I: MEASURES OF HUMAN NOISE EXPOSURE

ABL

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.

TABLE I MEASURES OF HUMAN NOISE EXPOSURE

3

| NOISE SOURCE/SUBJECT | | OPERATION | | IDENTIFICATION | |
|--|--|-----------------------|-----|------------------------------|-----|
| MA-8 AIR CONDITIONER | | VENT CYCLE | | OMEGA 3.2 TEST 71-020-320 | |
| NEAR FIELD NOISE LEVELS (INSIDE HANGER) | | RUN 03 23 AUG 74 | | PAGE H3 | |
| DISTANCE (M) -> | | 2 | 2 | 2 | 2 |
| ANGLE (DEG) -> | | 160 | 180 | 200 | 220 |
| C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBA) AT EAR | | 240 | 260 | 280 | 300 |
| A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR | | 2 | 2 | 2 | 2 |
| MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) | | 340 | 320 | 300 | 280 |
| NO PROTECTION | | TEST CONDITION 1/A | | OPERATOR LOCATION | |
| OASLC | | 90 | 89 | 86 | 86 |
| OASLA | | 86 | 85 | 81 | 77 |
| T | | 339 | 404 | 407 | 78 |
| MINIMUM QPL EAR MUFFS | | 65 | 65 | 63 | 63 |
| OASLA* | | 67 | 65 | 61 | 61 |
| T | | 960 | 960 | 960 | 960 |
| AMERICAN OPTICAL 1700 EAR MUFFS | | 60 | 61 | 57 | 57 |
| OASLA* | | 62 | 61 | 60 | 60 |
| T | | 960 | 960 | 960 | 960 |
| V-51R EAR PLUGS | | 63 | 62 | 58 | 53 |
| OASLA* | | 960 | 960 | 960 | 960 |
| T | | 49 | 47 | 44 | 40 |
| AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS | | 60 | 60 | 60 | 60 |
| OASLA* | | 960 | 960 | 960 | 960 |
| T | | 49 | 47 | 44 | 40 |
| H-133 GROUND COMMUNICATION UNIT | | 59 | 57 | 56 | 53 |
| OASLA* | | 960 | 960 | 960 | 960 |
| T | | 59 | 57 | 56 | 53 |
| COMMUNICATION PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB) | | 55 | 55 | 55 | 55 |
| PSIL | | 80 | 79 | 78 | 75 |
| ANNOYANCE PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB) | | 71 | 70 | 69 | 73 |
| TONE CORRECTION (C IN DB) | | 73 | 76 | 73 | 73 |
| PNLT | | 97 | 96 | 94 | 93 |
| C | | 1 | 1 | 1 | 1 |
| * BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE. | | | | | |

TABLE: MEASURES OF HUMAN NOISE EXPOSURE

3

| NOISE SOURCE/SUBJECT | | OPERATION* | | IDENTIFICATION | | | | | | | | | | |
|---|---------------------------|--|-----|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| MA-6 AIR CONDITIONER | | OMEGA 3-2 TEST 71-020-328 RUN 84 | | | | | | | | | | | | |
| NEAR FIELD NOISE LEVELS (INSIDE HANGER) | | 23 AUG 74 | | | | | | | | | | | | |
| | | PAGE H4 | | | | | | | | | | | | |
| DISTANCE (M) --> | ANGLE (DEG) --> | 0 | 20 | 40 | 60 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 |
| HAZARD/PROTECTION C-MEASURED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR A-MEASURED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) | | | | | | | | | | | | | | |
| NO PROTECTION | | | | | | | | | | | | | | |
| OASLC | 95 | 94 | 92 | 90 | 90 | 89 | 87 | 86 | 85 | 91 | 91 | 91 | 91 | |
| OASLA | 93 | 91 | 89 | 85 | 84 | 83 | 82 | 81 | 81 | 87 | 87 | 87 | 84 | |
| T | 101 | 143 | 202 | 404 | 480 | 571 | 679 | 807 | 807 | 285 | 285 | 285 | 480 | |
| MINIMUM QPL EAR MUFFS | 70 | 70 | 68 | 65 | 65 | 66 | 64 | 62 | 62 | 67 | 67 | 67 | 66 | |
| OASLA* | T | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | |
| AMERICAN OPTICAL 1700 EAR MUFFS | T | 65 | 65 | 64 | 62 | 63 | 62 | 61 | 60 | 58 | 57 | 63 | 63 | |
| OASLA* | T | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | |
| V-51R EAR PLUGS | T | 69 | 67 | 65 | 61 | 60 | 59 | 58 | 57 | 58 | 64 | 64 | 61 | |
| OASLA* | T | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | |
| AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS | T | 54 | 53 | 51 | 47 | 47 | 46 | 45 | 44 | 43 | 49 | 50 | 48 | |
| OASLA* | T | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | |
| H-133 GROUND COMMUNICATION UNIT | T | 65 | 64 | 62 | 59 | 58 | 57 | 55 | 54 | 53 | 58 | 59 | 58 | |
| OASLA* | T | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | |
| COMMUNICATION PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB) | PSIL | 88 | 86 | 84 | 79 | 77 | 77 | 76 | 75 | 75 | 81 | 81 | 79 | |
| ANNOYANCE PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB) | TONE CORRECTION (C IN DB) | PNL T | 105 | 104 | 102 | 100 | 100 | 99 | 98 | 96 | 94 | 93 | 99 | 100 |
| C | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | |

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.

TABLE I MEASURES OF HUMAN NOISE EXPOSURE

3

| | | | | | | | | | | | |
|--|--|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| NOISE SOURCE/SUBJECT: | | IDENTIFICATIONS | | | | | | | | | |
| MA-8 AIR CONDITIONER NEAR AIR FIELD NOISE LEVELS (INSIDE HANGER) | |) OMEGA 3.2 TEST 71-020-320 RUN 05 23 AUG 74 PAGE HS | | | | | | | | | |
| OPERATION: | |) COOLING CYCLE | | | | | | | | | |
| DISTANCE (M) -> | | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 2 | 2 |
| ANGLE (DEG) -> | | 260 | 260 | 300 | 300 | 320 | 340 | 0 | 20 | 40 | 60 |
| HAZARD/PROTECTION | |) C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DB) AT EAR A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) | | | | | | | | | |
| NO PROTECTION | | 91 | 92 | 92 | 93 | 94 | 101 | 100 | 97 | 96 | 96 |
| OASLC | | 61 | 61 | 85 | 89 | 92 | 99 | 97 | 92 | 93 | 90 |
| OASLA* | | 607 | 807 | 404 | 202 | 120 | 36 | 50 | 120 | 143 | 120 |
| T | | | | | | | | | | | 170 |
| MINIMUM QPL EAR MUFFS | | 66 | 67 | 67 | 68 | 69 | 77 | 76 | 73 | 72 | 72 |
| OASLA* | | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 |
| T | | | | | | | | | | | 960 |
| AMERICAN OPTICAL 1700 EAR MUFFS | | 64 | 64 | 64 | 65 | 72 | 71 | 68 | 68 | 67 | 66 |
| OASLA* | | 64 | 65 | 64 | 65 | 72 | 71 | 68 | 68 | 67 | 66 |
| T | | | | | | | | | | | 64 |
| V-51R EAR PLUGS | | 59 | 59 | 62 | 66 | 66 | 75 | 73 | 69 | 67 | 67 |
| OASLA* | | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 |
| T | | | | | | | | | | | 960 |
| AMERICAN OPTICAL 1700 EAR MUFFS PLUS | | 47 | 47 | 49 | 52 | 53 | 60 | 59 | 54 | 53 | 53 |
| OASLA* | | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 |
| T | | | | | | | | | | | 960 |
| H-133 GROUND COMMUNICATION UNIT | | 58 | 59 | 60 | 62 | 64 | 71 | 69 | 65 | 66 | 66 |
| OASLA* | | 963 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 |
| T | | | | | | | | | | | 960 |
| COMMUNICATION PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB) | | 76 | 76 | 80 | 84 | 87 | 94 | 92 | 86 | 85 | 86 |
| PSIL | | | | | | | | | | | 86 |
| ANNOUNCE | |) PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB) TONE CORRECTION (C IN DB) | | | | | | | | | |
| PNLT | | 94 | 95 | 96 | 102 | 104 | 111 | 108 | 104 | 107 | 109 |
| C | | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 |
| *) BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE. | | 10 ⁴ 10 ⁵ 10 ⁶ 10 ⁷ 10 ⁸ 10 ⁹ 10 ¹⁰ 10 ¹¹ 10 ¹² 10 ¹³ | | | | | | | | | |

TABLE: MEASURES OF HUMAN NOISE EXPOSURE
3

| NOISE SOURCE/SUBJECT | | OPERATION: | | IDENTIFICATION: | |
|--|--|------------|---------------|--|----------------------|
| MA-6 AIR CONDITIONER | NEAR FIELD NOISE LEVELS (INSIDE HANGER) | C | COOLING CYCLE | OMEGA 3-2 TEST 71-020-320 RUN 06 | 23 AUG 74 PAGE H6 |
| DISTANCE (M) -> | 2 | 2 | 2 | 2 | 2 |
| ANGLE (DEG) -> | 160 | 180 | 200 | 220 | 240 |
| NO PROTECTION | | | | | |
| OASLC | 92 | 92 | 91 | 93 | 93 |
| OASLA | 87 | 87 | 86 | 84 | 82 |
| T | 285 | 285 | 339 | 480 | 679 |
| MINIMUM QPL EAR MUFFS | | | | | |
| OASLA* | 69 | 68 | 67 | 68 | 68 |
| T | 960 | 960 | 960 | 960 | 960 |
| AMERICAN OPTICAL 1700 EAR MUFFS | | | | | |
| OASLA* | 64 | 63 | 63 | 65 | 66 |
| T | 960 | 960 | 960 | 960 | 960 |
| V-51R EAR PLUGS | | | | | |
| OASLA* | 64 | 64 | 63 | 62 | 60 |
| T | 960 | 960 | 960 | 960 | 960 |
| AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS | | | | | |
| OASLA* | 50 | 50 | 49 | 49 | 48 |
| T | 960 | 960 | 960 | 960 | 960 |
| H-133 GROUND COMMUNICATION UNIT | | | | | |
| OASLA* | 60 | 59 | 59 | 60 | 60 |
| T | 960 | 960 | 960 | 960 | 960 |
| COMMUNICATION PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB) | | | | | |
| PSIL | 81 | 81 | 81 | 79 | 76 |
| ANNOYANCE PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB) | | | | | |
| TONE CORRECTION (C IN DB) | | | | | |
| PNL T | 101 | 100 | 99 | 98 | 97 |
| C | 2 | 1 | 0 | 1 | 1 |
| * BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE. | | | | | |

TABLE I MEASURES OF HUMAN NOISE EXPOSURE

3

| | |
|-------------------------|------------|
| NOISE SOURCE/SUBJECT: | OPERATION: |
| MA-8 AIR CONDITIONER | |
| NEAR FIELD NOISE LEVELS | |
| (INSIDE HANGER) | |

| HAZARD/PROTECTION C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DB) AT EAR A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DB) AT EAR MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) | DISTANCE (M) -> | | ANGLE (DEG) --> | | 0 | | 20 | | 40 | | 60 | | 80 | | 100 | | 120 | | 140 | | 160 | | 180 | | 200 | | 220 | | 240 | | | | |
|---|-----------------|-------|-----------------|----|-------|-------|----|-------|-------|----|-------|-------|----|-------|-------|----|-------|-------|-----|-------|-------|----|-------|-------|-----|-------|-------|----|-------|-------|----|----|----|
| | NO PROTECTION | OASLC | OASLA | T | OASLC | OASLA | T | OASLC | OASLA | T | OASLC | OASLA | T | OASLC | OASLA | T | OASLC | OASLA | T | OASLC | OASLA | T | OASLC | OASLA | T | OASLC | OASLA | T | OASLC | OASLA | T | | |
| AMERICAN OPTICAL 1700 EAR MUFFS | 60 | 62 | 60 | 60 | 62 | 60 | 60 | 62 | 63 | 60 | 62 | 60 | 60 | 62 | 60 | 60 | 62 | 60 | 60 | 62 | 60 | 62 | 60 | 60 | 62 | 60 | 60 | 62 | 60 | 60 | | | |
| AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS | 55 | 58 | 56 | 57 | 58 | 56 | 58 | 56 | 55 | 56 | 58 | 56 | 56 | 55 | 56 | 55 | 55 | 56 | 55 | 56 | 57 | 55 | 56 | 55 | 56 | 55 | 56 | 55 | 56 | 55 | 56 | | |
| H-133 GROUND COMMUNICATION UNIT OASLA* | 51 | 53 | 54 | 55 | 56 | 55 | 56 | 55 | 55 | 56 | 55 | 56 | 55 | 55 | 56 | 55 | 55 | 56 | 55 | 56 | 55 | 56 | 55 | 56 | 55 | 56 | 55 | 56 | 55 | 56 | 55 | 56 | |
| MA-8 AIR CONDITIONER NEAR FIELD NOISE LEVELS (INSIDE HANGER) | 70 | 72 | 73 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |

| COMMUNICATION PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB) | PSIL | 70 | 72 | 73 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | | | |
|--|------|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|
| ANNOYANCE PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TONE CORRECTION (C IN DB) | PNLT | 92 | 93 | 98 | 99 | 100 | 98 | 99 | 98 | 99 | 98 | 99 | 98 | 99 | 98 | 99 | 98 | 99 | 98 | 99 | 98 | 99 | 98 | 99 | 98 | 99 | 98 | 99 | 98 | 99 | 98 | 99 | | |
| C | | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.

** TEST 71-020-320
RUN 07
23 AUG 74
PAGE H7

IDENTIFICATION:
OMEGA 3.2
TEST 71-020-320
RUN 07
23 AUG 74
PAGE H7

TABLE I MEASURES OF HUMAN NOISE EXPOSURE

3

| NOISE SOURCE/SUBJECT | | OPERATION | | IDENTIFICATION | | | | | | | | | | |
|--|--|------------|-----|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| MA-8 AIR CONDITIONER NEAR FIELD NOISE LEVELS (INSIDE HANGER) | | HEAT CYCLE | | TEST 71-020-320 RUN 08 23 AUG 74 PAGE H8 | | | | | | | | | | |
| DISTANCE (M) -> | ANGLE (DEG) --> | 260 | 280 | 300 | 320 | 340 | 0 | 20 | 40 | 60 | 80 | 100 | 120 | 140 |
| HAZARD/PROTECTION | | | | | | | | | | | | | | |
| C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN OBC) AT EAR | A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN OBA) AT EAR | | | | | | | | | | | | | |
| MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) | | | | | | | | | | | | | | |
| NO PROTECTION | | | | | | | | | | | | | | |
| OASLC | 84 | 84 | 83 | 82 | 82 | 91 | 91 | 90 | 93 | 93 | 93 | 90 | 89 | |
| OASLA | 76 | 77 | 77 | 76 | 77 | 82 | 82 | 84 | 86 | 86 | 86 | 86 | 86 | |
| T | 960 | 960 | 960 | 960 | 960 | 679 | 679 | 460 | 240 | 202 | 202 | 339 | 339 | |
| MINIMUM QPL EAR MUFFS | 60 | 59 | 58 | 58 | 58 | 69 | 69 | 67 | 68 | 70 | 69 | 68 | 66 | |
| OASLA* | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | |
| T | 57 | 57 | 56 | 56 | 54 | 64 | 64 | 63 | 65 | 66 | 65 | 63 | 61 | |
| AMERICAN OPTICAL 1700 EAR MUFFS | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | |
| OASLA* | T | 52 | 53 | 53 | 53 | 53 | 59 | 58 | 59 | 61 | 62 | 62 | 61 | |
| V-51R EAR PLUGS | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | |
| OASLA* | T | 40 | 40 | 40 | 39 | 39 | 47 | 46 | 47 | 49 | 50 | 49 | 47 | |
| AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | |
| OASLA* | T | 52 | 52 | 52 | 51 | 51 | 59 | 58 | 59 | 61 | 62 | 62 | 60 | |
| H-133 GROUND COMMUNICATION UNIT | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | 960 | |
| OASLA* | T | 71 | 72 | 72 | 72 | 76 | 75 | 76 | 79 | 80 | 81 | 79 | 80 | |
| COMMUNICATION PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB) | | | | | | | | | | | | | | |
| PSIL | 91 | 91 | 90 | 90 | 93 | 98 | 97 | 100 | 103 | 105 | 105 | 102 | 99 | |
| ANNOYANCE PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB) | | | | | | | | | | | | | | |
| TONE CORRECTION (C IN DB) | 91 | 1 | 1 | 0 | 0 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| PNLT | C | | | | | | | | | | | | | |

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.

TABLE I MEASURES OF HUMAN NOISE EXPOSURE

3

| NOISE SOURCE/SUBJECT | | OPERATION* | | IDENTIFICATION | |
|---|--|--|-----|--|-----|
| MA-6 AIR CONDITIONER | | HEAT CYCLE | | OMEGA 3.2 TEST 71-020-320 RUN 09 | |
| NEAR FIELD NOISE LEVELS (INSIDE HANGER) | | 23 AUG 74 | | | |
| | | PAGE H9 | | | |
| DISTANCE (M) --> | | 2 | 2 | 2 | 2 |
| ANGLE (DEG) --> | | 160 | 180 | 200 | 220 |
| NO PROTECTION | | 240 | 260 | 280 | 300 |
| C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBA) AT EAR | | MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) | | 320 | |
| NO PROTECTION | | A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR | | 340 TEST CONDITION 1/C | |
| OASLC | | 90 | 89 | 86 | 87 |
| OASLA | | 67 | 66 | 63 | 62 |
| T | | 285 | 339 | 571 | 679 |
| MINIMUM QPL EAR MUFFS | | | | | |
| OASLA* | | 66 | 65 | 64 | 64 |
| T | | 960 | 960 | 960 | 960 |
| AMERICAN OPTICAL 1700 EAR MUFFS | | | | | |
| OASLA* | | 61 | 60 | 59 | 60 |
| T | | 960 | 960 | 960 | 960 |
| V-51R EAR PLUGS | | | | | |
| OASLA* | | 64 | 63 | 59 | 57 |
| T | | 960 | 960 | 960 | 960 |
| AMERICAN OPTICAL 1700 EAR MUFFS PLUS | | | | | |
| OASLA* | | 50 | 49 | 46 | 43 |
| T | | 960 | 960 | 960 | 960 |
| H-133 GROUND COMMUNICATION UNIT | | | | | |
| OASLA* | | 59 | 57 | 56 | 54 |
| T | | 960 | 960 | 960 | 960 |
| COMMUNICATION | | | | | |
| PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB) | | | | | |
| PSIL | | 81 | 79 | 77 | 73 |
| ANNOUNCE | | | | | |
| PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNOB) | | | | | |
| TONE CORRECTION (C IN dB) | | | | | |
| PNLT | | 99 | 96 | 93 | 96 |
| C | | 2 | 2 | 1 | 1 |
| * BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE. | | | | | |